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PTO/SB/21 (04-04)

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)		Application Number	10/788,650
		Filing Date	February 27, 2004
		First Named Inventor	Chaitan KHOSLA
		Art Unit	1648
		Examiner Name	H. Park
Total Number of Pages in This Submission	20	Attorney Docket Number	300622000205

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form (1 page + duplicate) <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement (3 pages) <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance communication to Technology Center (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Form PTO-1449 (7 pages + duplicate) 51 References Return Receipt Postcard		
<table border="1"><tr><td>Remarks</td><td>CUSTOMER NO. 25225</td></tr></table>			Remarks	CUSTOMER NO. 25225
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	MORRISON & FOERSTER LLP Brenda J. Wallach - 45,193
Signature	<i>Brenda J Wallach</i>
Date	<i>Nov. 3, 2004</i>

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: *11-3-04*

Signature: *Rhea Amid* (Rhea Amid)



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FEE TRANSMITTAL for FY 2005 <small>Effective 10/01/2004. Patent fees are subject to annual revision.</small>		Complete if Known																																																																																																																																																																																																																																																															
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ADDITIONAL FEES <table border="1"><thead><tr><th colspan="2">Large Entity</th><th colspan="2">Small Entity</th><th rowspan="2">Fee Description</th><th rowspan="2">Fee Paid</th></tr><tr><th>Fee Code</th><th>Fee (\$)</th><th>Fee Code</th><th>Fee (\$)</th></tr></thead><tbody><tr><td>1051</td><td>130</td><td>2051</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr><tr><td>1052</td><td>50</td><td>2052</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet.</td><td></td></tr><tr><td>1053</td><td>130</td><td>1053</td><td>130</td><td>Non-English specification</td><td></td></tr><tr><td>1812</td><td>2,520</td><td>1812</td><td>2,520</td><td>For filing a request for ex parte reexamination</td><td></td></tr><tr><td>1804</td><td>920*</td><td>1804</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr><tr><td>1805</td><td>1,840*</td><td>1805</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr><tr><td>1251</td><td>110</td><td>2251</td><td>55</td><td>Extension for reply within first month</td><td></td></tr><tr><td>1252</td><td>430</td><td>2252</td><td>215</td><td>Extension for reply within second month</td><td></td></tr><tr><td>1253</td><td>980</td><td>2253</td><td>490</td><td>Extension for reply within third month</td><td></td></tr><tr><td>1254</td><td>1,530</td><td>2254</td><td>765</td><td>Extension for reply within fourth month</td><td></td></tr><tr><td>1255</td><td>2,080</td><td>2255</td><td>1,040</td><td>Extension for reply within fifth month</td><td></td></tr><tr><td>1401</td><td>340</td><td>2401</td><td>170</td><td>Notice of Appeal</td><td></td></tr><tr><td>1402</td><td>340</td><td>2402</td><td>170</td><td>Filing a brief in support of an appeal</td><td></td></tr><tr><td>1403</td><td>300</td><td>2403</td><td>150</td><td>Request for oral hearing</td><td></td></tr><tr><td>1451</td><td>1,510</td><td>1451</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr><tr><td>1452</td><td>110</td><td>2452</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr><tr><td>1453</td><td>1,330</td><td>2453</td><td>665</td><td>Petition to revive - unintentional</td><td></td></tr><tr><td>1501</td><td>1,370</td><td>2501</td><td>685</td><td>Utility issue fee (or reissue)</td><td></td></tr><tr><td>1502</td><td>490</td><td>2502</td><td>245</td><td>Design issue fee</td><td></td></tr><tr><td>1503</td><td>660</td><td>2503</td><td>330</td><td>Plant issue fee</td><td></td></tr><tr><td>1460</td><td>130</td><td>1460</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr><tr><td>1807</td><td>50</td><td>1807</td><td>50</td><td>Processing fee under 37 CFR 1.17(q)</td><td></td></tr><tr><td>1806</td><td>180</td><td>1806</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td>180.00</td></tr><tr><td>8021</td><td>40</td><td>8021</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr><tr><td>1809</td><td>790</td><td>2809</td><td>395</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr><tr><td>1810</td><td>790</td><td>2810</td><td>395</td><td>For each additional invention to be examined (37CFR 1.129(b))</td><td></td></tr><tr><td>1801</td><td>790</td><td>2801</td><td>395</td><td>Request for Continued Examination (RCE)</td><td></td></tr><tr><td>1802</td><td>900</td><td>1802</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr><tr><td colspan="2">SUBTOTAL (1) (\$)</td><td colspan="2">0.00</td><td colspan="2">Other fee (specify)</td></tr><tr><td colspan="2">2. 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Wallach</td><td>Registration No. (Attorney/Agent)</td><td>45,193</td><td>Telephone</td><td>(858) 720-7961</td></tr><tr><td>Signature</td><td><i>Brenda J. 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PATENT
Docket No. 300622000205

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on November 3, 2004.

Rhea Amid

Rhea Amid

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Chaitan KHOSLA et al.

Serial No.: 10/788,650

Filing Date: February 27, 2004

For: CELL-FREE SYNTHESIS OF
POLYKETIDES

Examiner: H. Park

Group Art Unit: 1648

INFORMATION DISCLOSURE
STATEMENT UNDER 37 C.F.R. § 1.97 & 1.98

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO-1449. Pursuant to the USPTO notice dated July 11, 2003, waiving the requirement under 37 C.F.R. § 1.98 (a)(2)(i) to provide copies of U.S. Patents and U.S. Published Applications, copies of those references are not submitted. Copies of the documents numbered 27-29, 31-32, and 35-94 were previously submitted in an Information Disclosure Statement and/or Office Action, directed to the related application Serial Number 09/602,725, filed June 26, 2000, now U.S. Patent No. 6,750,040,

10/06/04 09:03:00 100.00 04
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granted on June 15, 2004, and, accordingly, copies are not included herewith. This protocol conforms with 37 C.F.R. § 1.98(d) and M.P.E.P. 609(A)(2). Copies of the remaining foreign documents and non-patent literature are submitted herewith. The Examiner is requested to make these documents of record in the application.

This Information Disclosure Statement is submitted:

- ☐ With the application; accordingly, no fee or separate requirements are required.
- ☐ Before the mailing of a first Office Action after the filing of a Request for Continued Examination under § 1.114. However, if applicable, a certification under 37 C.F.R. § 1.97(e)(1) has been provided.
- ☐ Within three months of the application filing date or before mailing of a first Office Action on the merits; accordingly, no fee or separate requirements are required. However, if applicable, a certification under 37 C.F.R. § 1.97(e)(1) has been provided.
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The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 and § 1.98 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

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Dated: November 3, 2004

Respectfully submitted,

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Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 300622000205

Application Number 10/788,650

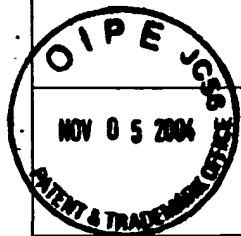
Applicant

Chaitan KHOSLA et al.

Filing Date February 27, 2004

Group Art Unit 1648

Mailing Date: November 3, 2004



U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
	1.	11/1985	4,551,433	DeBoer	435	253	
	2.	10/1989	4,874,748	Katz et al.	514	29	
	3.	06/1990	4,935,340	Baltz et al.	435	6	
	4.	11/1991	5,063,155	Cox et al.	435	76	
	5.	03/1992	5,098,837	Beckmann et al.	435	172.3	
	6.	09/1992	5,149,639	Katz et al.	435	76	
	7.	12/1992	5,168,052	Cox et al.	435	72	
	8.	02/1993	5,188,944	Omstead et al.	435	76	
	9.	10/1993	5,252,474	Gewain et al.	435	172.3	
	10.	12/1995	5,475,099	Knauf et al.	536	23.6	
	11.	05/1996	5,514,544	Rao et al.	435	6	
	12.	09/1997	5,672,491	Khosla et al.	435	148	
	13.	01/1998	5,712,146	Khosla et al.	435	252.35	
	14.	10/1998	5,824,513	Katz	435	76	
	15.	03/1999	5,876,991	DeHoff et al.	435	183	
	16.	08/1999	5,945,320	Burgett et al.	435	183	
	17.	12/1999	6,004,787	Katz et al.	435	183	
	18.	05/2000	6,060,234	Katz et al.	435	4	
	19.	05/2000	6,063,561	Katz et al.	435	4	
	20.	05/2000	6,066,721	Khosla et al.	536	23.1	
	21.	06/2000	6,080,555	Khosla et al.	435	41	
	22.	03/2001	6,200,813	Katz et al.	435	477	
	23.	08/2001	6,271,255	Leadlay et al.	514	450	
	24.	06/2004	6,750,040	Khosla et al.	435	41	

EXAMINER:

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FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO	
	25.	08/1997	EP 791655	Europe				
	26.	08/1997	EP 791656	Europe				
	27.	10/1991	WO 91/16334	WIPO				
	28.	07/1993	WO 93/13663	WIPO				
	29.	03/1995	WO 95/08548	WIPO				
	30.	12/1996	WO 96/40968	WIPO				
	31.	01/1997	WO 97/02358	WIPO				
	32.	04/1997	WO 97/13845	WIPO				
	33.	01/1998	WO 98/01546	WIPO				
	34.	01/1998	WO 98/01571	WIPO				

OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
	35.	Aparicio <i>et al.</i> , "Limited Proteolysis and Active-Site Studies of the First Multienzyme Component of the Erythromycin-Producing Polyketide Synthase," J BIOL CHEM (1994) 269(11):8524-8528
	36.	Bartel <i>et al.</i> , "Biosynthesis of Anthraquinones by Interspecies Cloning of Actinorhodin Biosynthesis Genes in Streptomyces: Clarification of Actinorhodin Gene Functions," J BACTERIOL (1990) 172(9):4816-4826
	37.	Beck <i>et al.</i> , "The Multifunctional 6-Methylsalicylic Acid Synthase Gene of <i>Penicillium Patulum</i> . Its Gene Structure Relative to that of Other Polyketide Synthases," EUR J BIOCHEM (1990) 192:487-498
	38.	Bedford <i>et al.</i> , "A Functional Chimeric Modular Polyketide Synthase Generated via Domain Replacement," CHEMISTRY & BIOLOGY (1996) 3(10):827-831
	39.	Bevitt <i>et al.</i> , "6-Deoxyerythronolide-B Synthase 2 from <i>Saccharopolyspora erythraea</i> : Cloning of the Structural Gene, Sequence Analysis and Inferred Domain Structure of the Multifunctional Enzyme," EUR J BIOCHEM (1992) 204:39-49
	40.	Bibb <i>et al.</i> , "Analysis of the Nucleotide Sequence of the <i>Streptomyces Glaucescens tcml</i> Genes Provides Key Information about the Enzymology of Polyketide Antibiotic Biosynthesis," EMBO J

EXAMINER:

DATE CONSIDERED:

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		Filing Date February 27, 2004	Group Art Unit 1648
		Mailing Date: November <u>3</u> , 2004	
		(1989) 8(9):2727-2736	
	41.	Caballero <i>et al.</i> , "Organisation and Functions of the <i>actVA</i> Region of the Actinorhodin Biosynthetic Gene Cluster of <i>Streptomyces coelicolor</i> ," MOL GEN GENET (1991) 230:401-412	
	42.	Caffrey <i>et al.</i> , "An Acyl-Carrier-Protein-Thioesterase Domain from the 6-Deoxyerythronolide B Synthase of <i>Saccharopolyspora erythraea</i> . High-Level Production, Purification and Characterisation in <i>Escherichia coli</i> ," EUR J BIOCHEM (1991) 195:823-830	
	43.	Caffrey <i>et al.</i> , "Identification of DEBS 1, DEBS 2 and DEBS 3, the Multienzyme Polypeptides of the Erythromycin-Producing Polyketide Synthase from <i>Saccharopolyspora erythraea</i> ," FEBS LETT (1992) 304(2):225-228	
	44.	Cane <i>et al.</i> , "Macrolide Biosynthesis. 7. Incorporation of Polyketide Chain Elongation Intermediates into Methymycin," J AM CHEM SOC (1993) 115:522-526	
	45.	Corcoran <i>et al.</i> , "The Biogenesis of Fatty Acids and Erythronolide-Like Substances in Mycelium-Free Extracts of <i>Streptomyces Erythraeus</i> ," in 5th International Congress of Chemotherapy, Vienna, ABSTRACTS OF COMMUNICATIONS (1967) 35-40	
	46.	Corcoran, ed., in Antibiotics Volume IV Biosynthesis, Springer-Verlag, New York (1982) 145-150	
	47.	Cortes <i>et al.</i> , "An Unusually Large Multifunctional Polypeptide in the Erythromycin-Producing Polyketide Synthase of <i>Saccharopolyspora erythraea</i> ," NATURE (1990) 348:176-178	
	48.	Daum <i>et al.</i> , "Mutational Biosynthesis of New Antibiotics," ANN REV MICROBIOL (1979) 33:241-265	
	49.	Davis <i>et al.</i> , "Functional Mapping of a Polyketide Synthase from <i>aspergillus terreus</i> Involved in Lovastatin Synthesis," Abst. of the Genetics of Industrial Microorganisms Mtg. (1994) 288:192	
	50.	Dimroth <i>et al.</i> , "Biosynthese Von 6-Methylsalicylsäure," EUR J BIOCHEM (1970) 13:98-110	
	51.	Donadio <i>et al.</i> , "Modular Organization of Genes Required for Complex Polyketide Biosynthesis," SCIENCE (1991) 252:675-679	
	52.	Donadio <i>et al.</i> , "Organization of the Enzymatic Domains in the Multifunctional Polyketide Synthase Involved in Erythromycin Formation in <i>Saccharopolyspora erythraea</i> ," GENE (1992) 111:51-60	
	53.	Donadio <i>et al.</i> , "Biosynthesis of the Erythromycin Macrolactone and a Rational Approach for Producing Hybrid Macrolides," GENE (1992) 115:97-103	
	54.	Donadio <i>et al.</i> , "An Erythromycin Analog Produced by Reprogramming of Polyketide Synthesis," PROC NATL ACAD SCI USA (1993) 90:7119-7123	
	55.	Dutton <i>et al.</i> , "Avermectin Biosynthesis. Intact Incorporation of a Diketide Chain-Assembly Intermediate into the Polyketide Macrocyclic Ring," TETRAHEDRON LETTERS (1994) 35(2):327-330	
	56.	Dutton <i>et al.</i> , "Novel Avermectins Produced by Mutational Biosynthesis," J ANTIBIOT (1991) 44(3):357-365	
EXAMINER:		DATE CONSIDERED:	
EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.			
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	Applicant Chaitan KHOSLA et al.	
	Filing Date February 27, 2004	Group Art Unit 1648
	Mailing Date: November <u>3</u> , 2004	

57.	Fernandez-Moreno <i>et al.</i> , "The <i>act</i> Cluster Contains Regulatory and Antibiotic Export Genes, Direct Targets for Translational Control by the <i>bldA</i> tRNA Gene of <i>Streptomyces</i> ," CELL (1991) 66:769-780
58.	Fernandez-Moreno <i>et al.</i> , "Nucleotide Sequence and Deduced Functions of a Set of Cotranscribed Genes of <i>Streptomyces coelicolor</i> A3(2) Including the Polyketide Synthase for the Antibiotic Actinorhodin," J BIOL CHEM (1992) 267:19278-19290
59.	Gokhale <i>et al.</i> , "Functional Orientation of the Acyltransferase Domain in a Module of the Erythromycin Polyketide Synthase," BIOCHEMISTRY (1998) 37:2524-2528
60.	Hallam <i>et al.</i> , "Nucleotide Sequence, Transcription and Deduced Function of a Gene Involved in Polyketide Antibiotic Synthesis in <i>Streptomyces coelicolor</i> ," GENE (1988) 74:305-320
61.	Hopwood <i>et al.</i> , "Product of 'Hybrid' Antibiotics by Genetic Engineering," NATURE (1985) 314(6012):642-644
62.	Hopwood <i>et al.</i> , "Genes for Polyketide Secondary Metabolic Pathways in Microorganisms and Plants," Secondary Metabolites: Their Function and Evolution, Wiley Chichester (Ciba Foundation Symposium 171) (1992) 88-112
63.	Hunaiti <i>et al.</i> , "Source of Methylmalonyl-Coenzyme A for Erythromycin Synthesis: Methylmalonyl-Coenzyme A Mutase from <i>Streptomyces erythreus</i> ," ANTIMICROBIAL AGENTS AND CHEMOTHERAPY (1984) 25(2):173-178
64.	Kao <i>et al.</i> , "Gain of Function Mutagenesis of the Erythromycin Polyketide Synthase. 2. Engineered Biosynthesis of an Eight-Membered Ring Tetraketide Lactone," J AM CHEM SOC (1997) 119(46):11339-11340
65.	Kao <i>et al.</i> , "Manipulation of Macrolide Ring Size by Directed Mutagenesis of a Modular Polyketide Synthase," J AM CHEM SOC (1995) 117(35):9105-9106
66.	Kao <i>et al.</i> , "Evidence for Two Catalytically Independent Clusters of Action Sites in a Functional Modular Polyketide Synthase," BIOCHEMISTRY (1996) 35(38):12363-12368
67.	Kao <i>et al.</i> , "Engineered Biosynthesis of Structurally Diverse Tetraketides by a Trimodular Polyketide Synthase," J AM CHEM SOC (1996) 118(38):9184-9185
68.	Kao <i>et al.</i> , "Engineered Biosynthesis of a Complete Macrolactone in a Heterologous Host," SCIENCE (1994) 265:509-512
69.	Khosla <i>et al.</i> , "Genetic Construction and Functional Analysis of Hybrid Polyketide Synthases Containing Heterologous Acyl Carrier Proteins," J BACTERIOL (1993) 175(8):2197-2204
70.	Kramer <i>et al.</i> , "Rational Design and Engineered Biosynthesis of a Novel 18-Carbon Aromatic Polyketide," J AM CHEM SOC (1997) 119(4):635-639
71.	Kuhstoss <i>et al.</i> , "Production of a Novel Polyketide Through the Construction of a Hybrid Polyketide Synthase," GENE (1996) 183:231-236

EXAMINER:	DATE CONSIDERED:
-----------	------------------

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

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	Filing Date February 27, 2004	Group Art Unit 1648
	Mailing Date: November <u>3</u> , 2004	

72.	Lanz <i>et al.</i> , "The Role of Cysteines in Polyketide Synthase," J BIOL CHEM (1991) 266(15):9971-9976
73.	Leadlay <i>et al.</i> , "The Erythromycin-Producing Polyketide Synthase," BIOCHEM SOC TRANSACTIONS (1993) 21:218-222
74.	MacNeil <i>et al.</i> , "Complex Organization of the <i>Streptomyces avermitilis</i> Genes Encoding the Avermectin Polyketide Synthase," GENE (1992) 115:119-125
75.	Malpartida <i>et al.</i> , "Molecular Cloning of the Whole Biosynthetic Pathway of a <i>Streptomyces</i> Antibiotic and its Expression in a Heterologous Host," NATURE (1984) 309:462-464
76.	Malpartida <i>et al.</i> , "Physical and Genetic Characterisation of the Gene Cluster for the Antibiotic Actinorhodin in <i>Streptomyces coelicolor</i> A3(2)," MOL GEN GENET (1986) 205:66-73
77.	Marsden <i>et al.</i> , "Stereospecific Acyl Transfers on the Erythromycin-Producing Polyketide Synthase," SCIENCE (1994) 263:378-380
78.	McDaniel <i>et al.</i> , "Gain-of-Function Mutagenesis of a Modular Polyketide Synthase," J AM CHEM SOC (1997) 119(18):4309-4310
79.	Oliynyk <i>et al.</i> , "A Hybrid Modular Polyketide Synthase Obtained by Domain Swapping," CHEM BIOL (1996) 3(10):833-839
80.	Omura <i>et al.</i> , "Inhibition of the Biosynthesis of Leucomycin, A Macrolide Antibiotic, by Cerulenin," J BIOCHEM (1974) 75:193-195
81.	Pereda <i>et al.</i> , "The Loading Domain of the Erythromycin Polyketide Synthase is not Essential for Erythromycin Biosynthesis in <i>Saccharopolyspora erythraea</i> ," MICROBIOLOGY (1998) 144:543-553
82.	Pieper <i>et al.</i> , "Remarkably Broad Substrate Specificity of a Modular Polyketide Synthase in a Cell-Free System," J AM CHEM SOC (1995) 117(45):11373-11374
83.	Pieper <i>et al.</i> , "Cell-Free Synthesis of Polyketides by Recombinant Erythromycin Polyketide Synthase," NATURE (1995) 378:263-266
84.	Pieper <i>et al.</i> , "Purification and Characterization of Bimodular and Trimodular Derivatives of the Erythromycin Polyketide Synthase," BIOCHEMISTRY (1997) 36(7):1846-1851
85.	Pieper <i>et al.</i> , "Erythromycin Biosynthesis: Kinetic Studies on a Fully Active Modular Polyketide Synthase Using Natural and Unnatural Substrates," BIOCHEMISTRY (1996) 35:2054-2060
86.	Roberts <i>et al.</i> , "[³ H]Tetrahydrocerulenin, a Specific Reagent for Radio-Labeling Fatty Acid Synthases and Related Enzymes," FEBS LETT (1983) 159(1,2):13-16
87.	Roberts <i>et al.</i> , "Use of [³ H]Tetrahydrocerulenin to Assay Condensing Enzyme Activity in <i>Streptomyces erythreus</i> ," BIOCHEM SOC TRANSACTIONS (1984) 12:642-643
88.	Rudd <i>et al.</i> , "Genetics of Actinorhodin Biosynthesis by <i>Streptomyces Coelicolor</i> A3(2)," J GEN MICROBIOL (1979) 114:35-43

EXAMINER:	DATE CONSIDERED:
-----------	------------------

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	Mailing Date: November <u>3</u> , 2004	

89.	Shen <i>et al.</i> , "Enzymatic Synthesis of a Bacterial Polyketide from Acetyl and Malonyl Coenzyme A," SCIENCE (1993) 262:1535-1540
90.	Sherman <i>et al.</i> , "Structure and Deduced Function of the Granaticin-Producing Polyketide Synthase Gene Cluster of <i>Streptomyces violaceoruber</i> Tü22," EMBO J (1989) 8(9):2717-2725
91.	Sherman <i>et al.</i> , "Functional Replacement of Genes for Individual Polyketide Synthase Components in <i>Streptomyces coelicolor</i> A3(2) by Heterogenous Genes from a Different Polyketide Pathway," J BACTERIOL (1992) 174(19):6184-6190
92.	Spencer <i>et al.</i> , "Purification and Properties of 6-Methylsalicylic Acid Synthase from <i>Penicillium patulum</i> ," BIOCHEM J (1992) 288:839-846
93.	Wawszkiewicz <i>et al.</i> , "Propionyl-CoA Dependent H ¹⁴ CO ₃ -Exchange into Methylmalonyl-CoA in Extracts of <i>Streptomyces erythraeus</i> ," BIOCHEMISCHE ZEITSCHRIFT (1964) 340:213-227
94.	Wiesmann <i>et al.</i> , "Polyketide Synthesis <i>In Vitro</i> on a Modular Polyketide Synthase," CHEM BIOL (1995) 2(9):583-589
95.	Brown <i>et al.</i> , J. Chem. Soc. Chem. Commun. (1995) 15:1517-1518
96.	Cane <i>et al.</i> , J. Antibiotics (1995) 48:647-651
97.	Cortes <i>et al.</i> , Science (1995) 268:1487-1489
98.	Dalbie-McFarland <i>et al.</i> , Proc. Natl. Acad. Sci. USA (1982) 79:6409
99.	Donadio <i>et al.</i> , Industrial Microorganism, Basic and Applied Molecular Genetics, R. H. Baltz, G.D. Hegeman and P.L. Skatrud (eds) (Amer. Soc. Microbial.), Washington, D.C. (1993) pp. 257-265
100.	Evans <i>et al.</i> , J. Am. Chem. Soc. (1992) 114:9434-9453
101.	Floss, Tetrahedron (1991) 47(31):6045-6058
102.	Fu, Biochemistry (1994) 33(31):9321-9326
103.	Geisselsoder <i>et al.</i> , BioTechniques (1987) 5:786
104.	Gordon <i>et al.</i> , Acc. Chem. Res. (1996) 29(3):144-154
105.	Hamilton <i>et al.</i> , J. Bacteriol. (1989) 171:4617
106.	Hershberger <i>et al.</i> (1989) "Genetics and Molecular Biology of Industrial Microorganisms," Am. Soc. for Microbiol. (Washington, DC) pp. 68-84
107.	Hopwood <i>et al.</i> , Phil. Trans. R. Soc. Lond. B (1989) 324:549-562
108.	Hutchinson, Bio/Technology (1994) 12:375-380
109.	Ireland <i>et al.</i> , J. Org. Chem. (1980) 45:1868-1880
110.	Jay <i>et al.</i> , J. Biol. Chem. (1984) 259:6311-6317
111.	Kao <i>et al.</i> , J. Am. Chem. Soc. (1994) 116:11612-11613

EXAMINER:	DATE CONSIDERED:
-----------	------------------

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	Filing Date February 27, 2004	Group Art Unit 1648
	Mailing Date: November <u>3</u> , 2004	

	112.	Katz et al., Ann. Review Microbiol. (1993) 47:875-912
	113.	Khosla et al., Molec. Microbiol. (1992) 6(12):3237-3249
	114.	Khosla et al., Tibtech (1996) 14:335-341
	115.	Kim et al., J. of Bacteriology (1995) 177(5):1202-1207
	116.	Kunkel, Proc. Natl. Acad. Sci. USA (1985) 82:488
	117.	Lambalot et al., J. Antibiotics (1992) 45:1981-1982
	118.	Lehrer et al., J. Immun. Meth. (1991) 137:167-173
	119.	Liu et al., J. Am. Chem. Soc. (1997) 199:10553-10554
	120.	Malpartida et al., Nature (1987) 325(6107):818-821
	121.	Marsden et al., Science (1998) 279:199-202
	122.	Martin et al., J. Am. Chem. Soc. (1997) 119:3193
	123.	Masamune et al., J. Am. Chem. Soc. (1975) 97:3512-3513
	124.	Masumoto et al., Tetrahedron Lett. (1988) 29:3575
	125.	McAlpine et al., The Journal of Antibiotics (1987) 40(8):1115-1122
	126.	McDaniel et al., Science (1993) 262:1546-1550
	127.	Perun, Drug Action and Drug Resistance in Bacteria, Vol. 1, S. Mitsuhashi (ed.) Univ. Park Press, Baltimore, 1977
	128.	Roberts et al., Biochem. Soc. Transactions (1992) 21:32S
	129.	Roberts et al., Eur. J. Biochem. (1993) 214:305-311
	130.	Robinson, Phil. Trans. R. Soc. Lond. B (1991) 332:107-114
	131.	Rohr, Angew. Chem. Int. Ed. Engl. (1995) 34(8):881-886
	132.	Ruan et al., J. of Bacteriology (1997) 79(20):6416-6425
	133.	Strohl et al., Molecular Microbiology (1992) 6(2):147-152
	134.	Strohl et al., Society of Industrial Microbiology (1991) 7:163-174
	135.	Toshima et al., J. Am. Chem. Soc. (1995) 117:3717
	136.	Tsoi et al., Chemistry & Biology (1995) 2:355-362
	137.	Tuan et al., Gene (1990) 90:21
	138.	Vedejs et al., J. Am. Chem. Soc. (1987) 109:5437-5446
	139.	Vedejs et al., J. Am. Chem. Soc. (1989) 111:8430-8438
	140.	Weber et al., J. Bacteriol. (1985) 164:425-433

EXAMINER:	DATE CONSIDERED:
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EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.